

Claims

1. Medical skin patch for the treatment of colds by releasing essential oils through evaporation, said skin patch comprising a backing layer permeable to gas and water vapour and a hydrophile polymer matrix connected thereto and having pressure-sensitive adhesive properties, the latter containing the following:

- at least one essential oil,
 - at least one hydrophile polymer,
 - at least one substance having an adsorbent effect or/and at least one substance having an emulsifying effect,
 - at least one pressure-sensitive adhesive polymer,
- the water content of said matrix being less than 5% by weight, preferably less than 1% by weight.

2. Skin patch according to claim 1, characterised in that the proportion of the hydrophile polymer/polymers is 15 to 50% by weight, preferably 20-40% by weight, in each case relative to the said matrix.

3. Skin patch according to claim 1 or 2, characterised in that the said polymer matrix contains one or more hydrophile polymers selected from the group comprising cellulose derivatives, especially carboxymethyl cellulose, carboxypropyl cellulose, as well as polyvinyl alcohols, polyvinyl pyrrolidone, polyacrylic acid, polyacrylamide, polyethylene glycols, alginates, tragacanth, gums, especially karaya gum, acacia gum, guar gum, as well as xanthan, carrageenan, bentonite, starch and starch derivatives.

4. Skin patch according to any one of the preceding claims, characterised in that the said substance(s) having

an adsorbent effect is/are selected from the group comprising cyclodextrin and cyclodextrin derivatives, silicic acid and its derivatives, as well as medicinal charcoal.

5. Skin patch according to any one of the preceding claims, characterised in that the said substance(s) having emulsifying action is/are selected from the group comprising sodium palmitate, sodium stearate, triethanolamine stearate, sodium lauryl sulfate, gum Arabic, alkonium bromide, benzalkonium bromide, cetylpyridium chloride, cetyl alcohol, stearyl alcohol, higher branched fatty alcohols, partial fatty acids of polyhydric alcohols, partial fatty acid esters of sorbitan, partial fatty acid esters of polyoxyethylene sorbitan, sorbitol ether of polyoxyethylene, fatty acid esters of polyoxyethylene, fatty alcohol ethers of polyoxyethylene, fatty acid esters of saccharose, fatty acid esters of polyglycerol, lecithin and complex emulsifiers.

6. Skin patch according to any one of the preceding claims, characterised in that the overall proportion of the said substances having an emulsifying effect is 0.1 to 40% by weight, preferably 1 to 30% by weight, especially preferably 5 to 20% by weight, each relative to the said polymer matrix.

7. Skin patch according to any one of the preceding claims, characterised in that the said essential oil(s) is/are selected from the group comprising eucalyptol (cineol), menthol, thymol, borneol, bisabolol, mint oil, peppermint oil, spearmint oil, eucalyptus oil, camphor, turpentine oil, pine-needle oil, anise oil, fennel oil, thyme oil, rosemary oil, camomile oil and clove oil, a combination of menthol, camphor and pine oil being especially preferred.

8. Skin patch according to any one of the preceding claims, characterized in that the overall proportion of the said essential oil/oils is 5 to 25% by weight, preferably 10 to 20% by weight, in each case relative to the said polymer matrix.

9. Skin patch according to any one of the preceding claims, characterised in that the proportion of the pressure-sensitive adhesive polymer/polymers is 5 to 60% by weight, preferably 5 to 40% by weight, each relative to the said polymer matrix.

10. Skin patch according to claim 9, characterised in that the pressure-sensitive adhesive polymer(s) is/are selected from the group comprising polyacrylates, polymethacrylates, polydimethyl siloxane, polyvinyl acetate, polyisobutene, polyisobutylene, S-I-S block copolymers, polyterpenes, ethylene vinyl acetate copolymers, rubber and synthetic rubbers.

11. Skin patch according to any one of the preceding claims, characterised in that the said polymer matrix contains additional adjuvants, preferably moisturizers or/and antifoaming agents, with the proportion of said adjuvants preferably amounting to 1 to 50% by weight, especially 5 to 30% by weight.

12. Skin patch according to any one of the preceding claims, characterised in that the skin-facing surface of the polymer matrix is covered with a detachable protective layer.

13. Process for the production of a medical skin patch comprising a hydrophile, pressure-sensitive adhesive poly-

mer matrix with a content of at least one essential oil for the treatment of colds, said process comprising the following steps:

- (a) producing a coating compound containing the below-mentioned components, by mixing said components:
 - at least one essential oil,
 - at least one hydrophile polymer,
 - at least one pressure-sensitive adhesive polymer in a nonaqueous solvent,
 - at least one substance having an adsorbent effect or/and at least one substance having an emulsifying effect;
- (b) coating the said compound onto a backing layer permeable to gas and water vapour;
- (c) leaving to dry or solidify, thereby obtaining the polymer matrix;
- (d) punching out or cutting out of individual patches.

14. Process according to claim 13, characterised in that at least step (a) is performed with cooling, preferably at temperatures below 15 °C, especially at temperatures below 10 °C.

15. Process according to claim 13 or 14, characterised in that the coating compound produced in step (a) remains processible for a period of at least 3 h, preferably at least 5 h, and with particular preference for a period of at least 8 h, following its production.

16. Process according to any one of claims 13 to 15, characterised in that the proportion of the hydrophile polymer/polymers in the coating compound is 15 to 50% by weight, preferably 20-40% by weight.

17. Process according to any one of claims 13 to 16, characterised in that the overall proportion of the substance(s) having an emulsifying effect or/and of the substance(s) having an adsorbent effect contained in the coating compound is 0.1 to 40% by weight, preferably 1 to 30% by weight, especially preferably 5 to 20% by weight.

18. Process according to any one of claims 13 to 17, characterised in that the overall proportion of the essential oil(s) in the coating mass is 5 to 25% by weight, preferably 10 to 20% by weight.

19. Process according to any one of claims 13 to 18, characterised in that the proportion of the pressure-sensitive adhesive polymer/polymers in the coating compound is 5 to 60% by weight, especially preferably 5 to 40% by weight.

20. Process according to any one of claims 13 to 19, characterised in that additional adjuvants are admixed to the coating compound, preferably moisturizers or/and anti-foaming agents, the proportion of these adjuvants preferably being 1 to 50% by weight, especially 5 to 30% by weight.

21. Process according to any one of claims 13 to 20, characterised in that the adhesive surface of the polymer matrix is covered with a detachable protective layer.

22. Process according to any one of claims 13 to 21, characterised in that the said coating compound contains the following components:

- 30 to 40% by weight of polyacrylate pressure-sensitive adhesive solution,
- 0.1 to 1% by weight of Al-acetylacetonate,

- 20 to 40% by weight of hydrophile polymer(s), preferably karaya gum,
- 1 to 10% by weight of a substance/substances having an emulsifying effect, preferably Tween 80,
- 0.5 to 10% by weight of antifoaming agent,
- 5 to 20% by weight of essential oil(s), preferably a combination of camphor, menthol and pine oil,

the sum of the proportions of the individual components always being 100% by weight.

23. Process according to any one of claims 13 to 22, characterised in that the said coating compound contains the following components:

- 5% to 10% by weight of polyacrylate pressure-sensitive adhesive solution,
- 20 to 35% by weight of glycerol (anhydrous),
- 15 to 25% by weight of propylene glycol,
- 10 to 20% by weight of adsorbent substance(s), preferably a combination of silicic acid and hydroxypropyl-beta-cyclodextrin,
- 15 to 25% by weight of hydrophile polymer(s), preferably karaya gum,
- 5 to 20% by weight of essential oil(s), preferably a combination of camphor, menthol and pine oil,

the sum of the proportions of the individual components always amounting to 100% by weight.

24. Method of treating colds, wherein a skin patch according to any one of claims 1 to 12 or a skin patch produced according to any one of the processes described in any one of claims 13 to 23 is adhered to the diseased person's skin

in the region of the chest, the back, the forehead, the neck or the nape, thus enabling a continuous release of the said essential oils by evaporation as well as the subsequent uptake of the evaporated essential oils via the person's nose or mouth by way of inhalation.